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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/672,297	09/25/2003	Willard E. Wood	11816.56USU1	4458

23552 7590 07/13/2006

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EXAMINER	
ASINOVSKY, OLGA	
ART UNIT	**PAPER NUMBER**
1711	

DATE MAILED: 07/13/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/672,297	WOOD ET AL.	
	Examiner	Art Unit	
	Olga Asinovsky	1711	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *06 April 2006*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *16-19,21,25-29,82-91,93-96 and 162-165* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *16-19,21,25-29,82-91,93-96 and 162-165* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date *5/19/06*.
4) ☒ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Continued Examination Under 37 CFR 1.114

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on April 20, 2006 has been entered.

The applicants amend claims to introduce that a cyclodextrin grafted to an acid anhydride functionalized polyolefin resin is an unmodified cyclodextrin. The amendment after final rejection has support in the original specification at page 42, lines 24-25.

The cancellation of Figures 2 through 6 is noted. In light of this cancellation the specification should be corrected in "Brief Discussion of the Drawings at page 23.

The cancellation of claims 20, 22-24, 30-81, 92, 97-161 is noted.

Applicants file new claims 163-165.

Claim Rejections - 35 USC § 112

2. Claims 96 and 165 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

3. Claim 96 recites the limitation "wherein the cyclodextrin compound has a substituent substantially on at least one –OH group at the –2 position of a glucose moiety in the cyclodextrin" in lines 1-3. There is insufficient antecedent basis for this

limitation in the claim 96. Claim 96 is depending on claim 82. Since the amended claim 82 requires an unmodified cyclodextrin, the thermoplastic polymer chip in claim 96 is indefinite in light of that the cyclodextrin compound has a substituent substantially on at least one –OH group at the –2 position of a glucose moiety in the cyclodextrin.

4. The dependency in the new claim 165 is not proper, since claim 111 is canceled.

Claim Rejections - 35 USC § 103

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

6. Claims 16-19, 21, 25-29, 82—91, 93-96 and 162-164 are rejected under 35 U.S.C. 103(a) as being unpatentable over Wood et al U.S. Patent 5,882,565 or EP 1 559 746 (cited by applicants) each in view of either Yahiaoui et al U.S. Patent 6,613,703 or Frank et al U.S. Patent 6,851,462; or Pitha et al U.S.Patent 5,173,481; or Sun et al U.S. Patent 6,689,378; or JP 03100065 to Yoshinaga.

The term "unmodified" cyclodextrin does not exclude derivatized cyclodextrin having at least one substituent on at least one –OH group at the –2 position of a glucose moiety in the cyclodextrin, support of that can be found in the original claim 96. The term "unmodified" is equivalent to the term "unsubstituted."

Wood' 565 has been discussed in the previously filed office actions.

The applicants argument is that Wood'565 discloses a derivatized=modified cyclodextrin, wherein upon the amendment of 04/26/2006 the present invention claims an unmodified cyclodextrin.

EP'746 discloses grafted cyclodextrin by cooperation=reaction between the cyclodextrin grafted onto the thermoplastic polymer. EP'746 recognizes that a starting cyclodextrin can be unmodified cyclodextrin [0008] at page 2. By grafting, a functional group such as hydroxyl functionality of the cyclodextrin reacts with a reactive functional group on the maleated polyolefin [0010] to [0015] and [0017] line 30. The cyclodextrin compound has a substituent substantially on at least one –OH group at the 2 position of a glucose moiety in the cyclodextrin, claim 5 at page 27. That is readable in the present claim 96.

Yahiaoui discloses any cyclodextrin, column 5, lines 45-52. The cyclodextrin compound is chemically reacted with the hydrophobic polymer which has been grafted with an acrylic acid or polyacrylic acid, col. 7, lines 58-61 and col. 8, lines 18-22.

Frank'462 discloses a rubber composition containing a cyclodextrin compound wherein a cyclodextrin compound or a substituted or derivatized cyclodextrin is compatible with the rubber, col. 3, lines 33-35. Cyclodextrin molecule contains at least one substituent on a cyclodextrin primary carbon atom, claim 3 at column 11 for producing a derivatized cyclodextrin molecule. By reviewing the disclosure in Frank invention it was found that

Yoshenaga, JP 3-100065 discloses an unsubstituted cyclodextrin in a film layer, col. 1, lines 35-36.

Pitha discloses the starting alpha-, beta- and gamma-cyclodextrin that is known as an unsubstituted cyclodextrin. The starting cyclodextrin is converted into a substituted cyclodextrin having desired functionality.

Sun discloses the cyclodextrin that is not being derivatized. The cyclodextrin includes any of the known cyclodextrins such as unsubstituted cyclodextrin, col. 3, lines 48-58. The cyclodextrin is immobilized on the substrate having free hydroxyl groups, or carboxylic acids, anhydride groups, col. 5, lines 48-48; column 6, lines 22-25 and 50-67; col. 7, lines 15-50.

Yoshinaga, JP 3-100065 discloses any cyclodextrine as discloses in the Abstract.

The unmodified cyclodextrin is known in the prior art. Each of the secondary reference discloses using an unmodified starting cyclodextrin.
In light of the fact, the starting unmodified cyclodextrin upon the contacting with a functionalized polyolefin or other functionalized thermoplastic resin having grafted functional polar group will inherently produce derivitized cyclodextrin by chemical reaction between the –OH group in the cyclodextrin and a grafted polar group of said polyolefin or other grafted polar group of the thermoplastic resin.

It would have been obvious to one of ordinary skill in the art to use a starting cyclodextrin in Wood"565 invention or EP'746 by employing of an unmodified or unsubstituted cyclodextin by teaching in each of the secondary reference for the purposes for obtaining the claimed requirement. The prima facie case of obviousness is that unmodified dextrin is easily converted into a derivatized cyclodextrin upon reaction between the hydroxyl group of said unmodified cyclodextrin and a functional polar group of grafted polyolefin, therefore, a similar effect would have been expected to provide adequate results. There is no showing of unexpected results derived from said use.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Olga Asinovsky whose telephone number is 571-272-1066. The examiner can normally be reached on 9:00 to 5:30 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, James Seidleck can be reached on 571-272-1078. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

O.A.

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